

ABSTRACT

A scanning optical microscope using a wavefront
converting element suffers minimum off-axis performance
degradation and allows the wavefront converting element to
5 be controlled by a simple method. Further, a pupil relay
optical system is simple in arrangement or unnecessary. A
laser scanning microscope includes a laser oscillator 6
and a wavefront converting element 5 for applying a
desired wavefront conversion to a laser beam 15 emitted
10 from the laser oscillator 6. An objective 7 collects a
wavefront-converted approximately parallel laser beam 17
emerging from the wavefront converting element 5 onto a
sample 9. A detector 29 detects signal light emitted from
the sample 9. An actuator 8 scans the objective 7 along a
15 direction perpendicular to the optical axis.